

AMENDMENT
Patent Application Serial No. 09/896,169

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REMARKS / ARGUMENTS:

Claims 1-17 are in the case and presented for consideration.

Claim 1 has been rewritten to clarify the claimed invention only, and not for any reason relating to patentability.

Claims 1-7, 9, and 11-17 were rejected under 35 U.S.C. 103(a) as being obvious from the article entitled "2200 MW SCR Installation on New Coal-Fired Project" (hereinafter Tonn et al.) in view of U.S. Patent 6,074,619 to Schoubye.

Applicant respectfully traverses the Office's rejection for the following reasons.

First, the cited prior art fails to teach or suggest at least one element or limitation recited in the claims. Independent claim 1 recites "means for supplying ammonia into the gas flow arranged within each flow channel." None of the prior art cited teaches or suggests ammonia supply means arranged within each flow channel of a plurality of vanes.

The Office states that Tonn et al. discloses an injection grid for supplying ammonia into a gas flow within a flue. However, Tonn et al. fails to teach or suggest a means for supplying ammonia into the gas flow arranged within each flow channel defined by a vane.

The Office further states that Schoubye teaches a flue that includes vanes for dividing gas flow into two or more separate flow channels. However, Schoubye '619 also does not teach or suggest a means for supplying ammonia into the gas flow arranged within each flow channel defined by a vane. Droplets from a spray originate outside and upstream of a series of plates and are carried through the spaces between the plates by an exhaust gas originating upstream of the duct. (See abstract; Fig. 1).

Independent claims 15 and 16 recite "means within each flow channel for supplying ammonia into the gas" and likewise recite a limitation which is not taught or suggest by the prior art. As explained above, neither Tonn et al. nor Schoubye '619 teach or suggest means within each flow channel for supplying ammonia into gas.

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Therefore, all claims depending from independent claims 1 and 16 are not obvious for the same reasons as state above.

Moreover, claim 7 recites additionally at least one static mixing tab. Applicant submits that none of the prior art cited teaches or suggests the recited element. The Office has not explained which reference discloses at least one static mixing tab.

Also, claim 8 was rejected under 35 U.S.C. 103(a) as being obvious from Tonn et al. in view of U.S. Patent 5,529,093 to Gallagher et al. Gallagher '093 is cited for teaching a tube bundle that isolates flow meters from disturbances and allows more accurate metering of fluids in pipelines. Applicant submits that Gallagher '093 is not combinable with either Tonn et al. or Schoubye '619. Gallagher '093 teaches metering of fluids whereas Tonn et al. and Schoubye '619 disclose systems in which gas is used to carry droplets. There is no motivation or suggestion to combine the references.

Furthermore, one skilled in the art of NO_x reduction in flue gases would not even look to a tube bundle used in a purely fluid system.

Also, claim 8 is not obvious for the reasons mentioned above with respect to claim 1.

Finally, claim 10 was rejected under 35 U.S.C. 103(a) as being obvious from Tonn et al. in view of Schoubye '619, and further in view of U.S. Patent 5,435,972 to Daw et al. The Office has cited Daw '972 for disclosing a pressure transducer that is mounted in a pressure tap.

Applicant submits that Daw '972 is not combinable with any of the other cited references. Daw '972 discloses a pressure transducer for use in a fluidized bed. Fluidized beds suspend solid fuels on upward-blowing jets of air during the combustion process resulting in a turbulent mixing of gas and solids. The dynamics of a fluidized bed are different from the dynamics of exhaust flue gas carrying droplets of ammonia through vanes for NO_x reduction in an SCR. The pressure differences are affected in a fluidized bed by changes in the degree of fluidization turbulence. On the other hand, Tonn et al.

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teaches a system in which pressure is affected by SCR catalyst bed properties and flow and mixing properties of exhaust gas and ammonia. There is no motivation or suggestion to combine the references.

Furthermore, one skilled in the art of SCR systems for NOx reduction would not look to Daw '972 for achieving a means for measuring flue gas flow rate for ammonia supply feed control feedback, and in particular a non-uniform ammonia to NOx mole ratio distribution at the inlet of an SCR for to compensate for non-uniform degradation of the catalyst within the SCR reactor catalyst bed.

Additionally, claim 10 is not obvious based on the arguments made above with respect to claim 1.

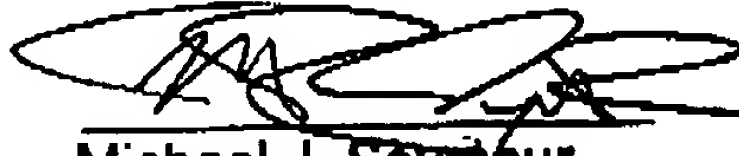
Accordingly, the application and claims are believed to be in condition for allowance, and favorable action is respectfully requested. No new matter has been added.

If any issues remain which may be resolved by telephonic communication, the Examiner is respectfully invited to contact the undersigned at the number below, if such will advance the application to allowance.

Favorable action is respectfully requested.

Respectfully submitted,

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